Capture the value of 5G and beyond – FWA and RedCap

I-Kuo Wei

Director, Strategic Engagement, Cloud Software & Services,
Market North & East Asia, Ericsson
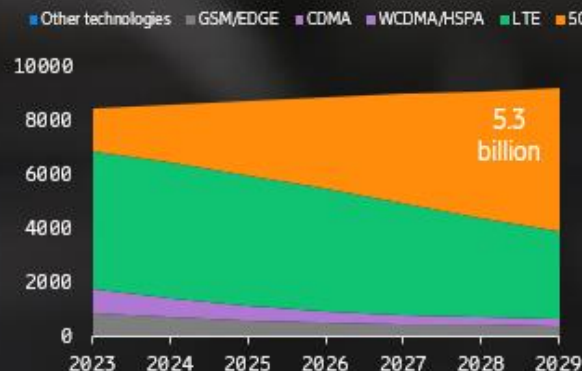
2024-5-31

Major opportunities ahead
Gear up from 5G to 5G Advanced

Globally, in 2029:

5G mobile subscription growth continues

Other technologies GSM/EDGE CDMA WCDMA/HSPA LTE 5G

10000
8000
6000
4000
2000
0

2023 2024 2025 2026 2027 2028 2029

5.3 billion

5G mobile subscriptions will reach 5.3 billion by 2029

5G population coverage (%)

4G 5G

100
80
60
40
20
0

2023	2024	2025	2026	2027	2028	2029
46	56	64	71	77	82	86

End of 2029, 5G population coverage is expected to reach 86%

Traffic Growth

56 GB
Mobile data traffic per Smartphone

3X

Mobile data traffic is attributed to 3 main drivers: improved device capabilities; an increase in data-intensive content; and growth in data consumption

FWA & Cellular IoT growth continues, 5G becomes main technologies

330M
FWA connections

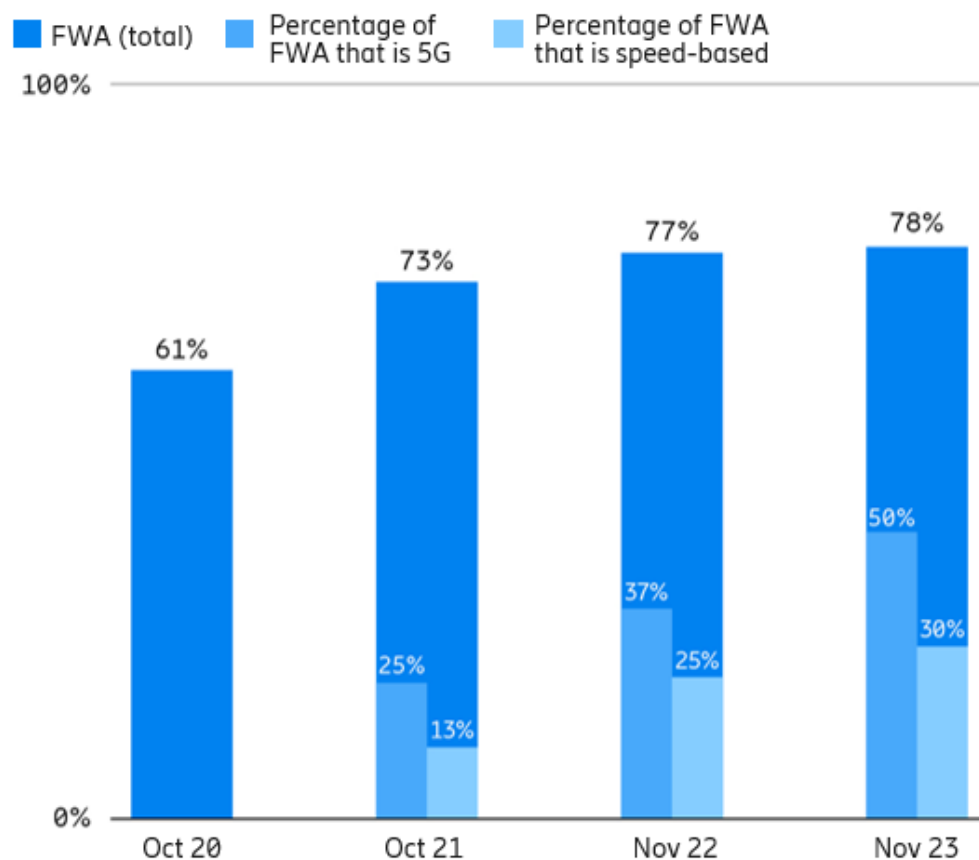**6.1B**
Cellular IoT connections

5G FWA is estimated to reach 85% of FWA market and 60% of cellular IoT connections will be broadband IoT

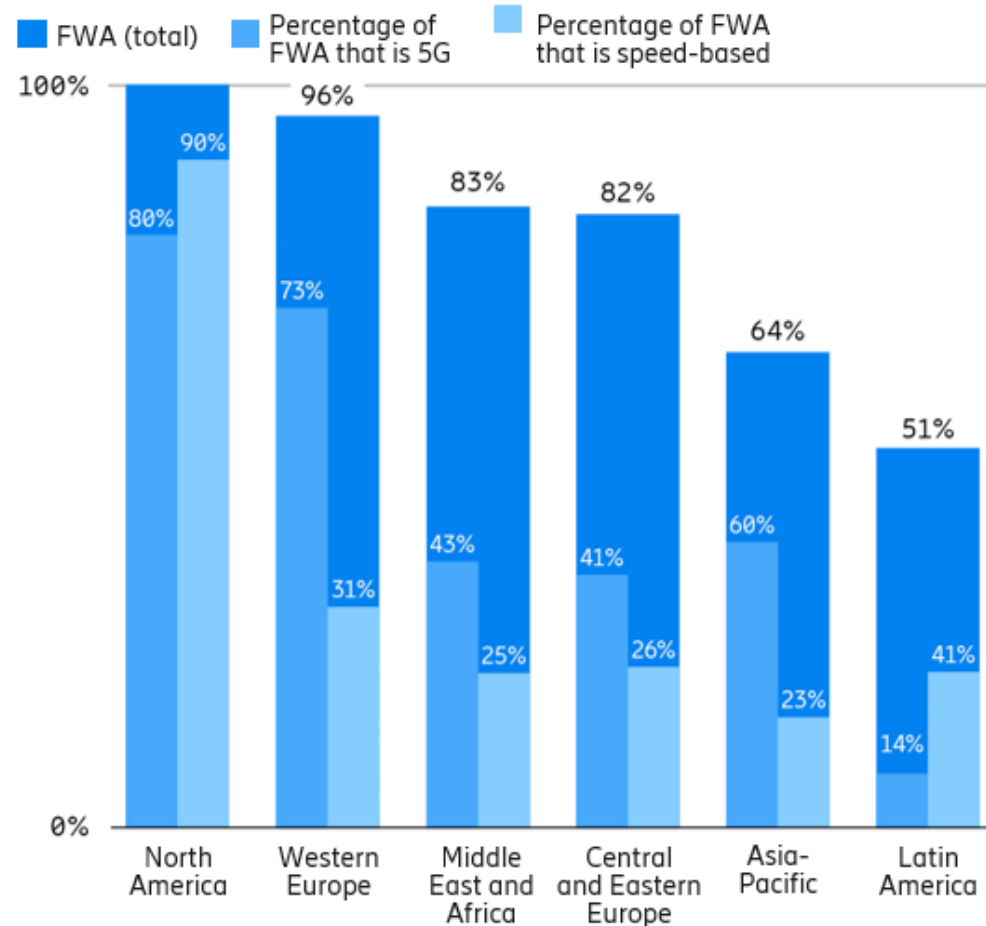# 152 service providers offering FWA over 5G

152 operators in 71 countries and territories had launched or soft-launched 3GPP-compliant 5G fixed wireless access services, just over 50% of those with launched 5G services

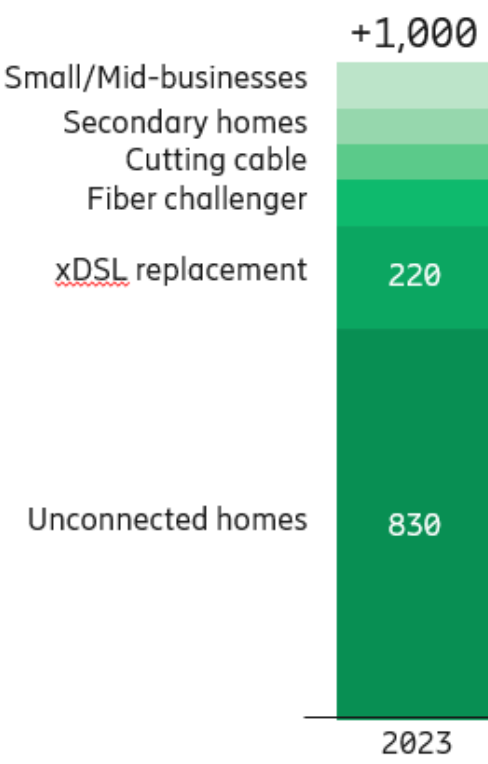## Global FWA service provider adoption 2020–2023

- FWA (total)
- Percentage of FWA that is 5G
- Percentage of FWA that is speed-based

	Oct 20	Oct 21	Nov 22	Nov 23
FWA (total)	61%	73%	77%	78%
Percentage of FWA that is 5G		25%	37%	50%
Percentage of FWA that is speed-based		13%	25%	30%

Regional FWA service provider adoption 2023

- FWA (total)
- Percentage of FWA that is 5G
- Percentage of FWA that is speed-based

	North America	Western Europe	Middle East and Africa	Central and Eastern Europe	Asia-Pacific	Latin America
FWA (total)	100%	96%	83%	82%	64%	51%
Percentage of FWA that is 5G	80%	73%	43%	41%	60%	14%
Percentage of FWA that is speed-based	90%	31%	25%	26%	23%	41%

Six opportunities for addressing the +1 billion premises digital divide

FWA addressable market (millions)

+1,000

- Small/Mid-businesses
- Secondary homes
- Cutting cable
- Fiber challenger

xDSL replacement — 220

Unconnected homes — 830

2023

FWA connections (millions)
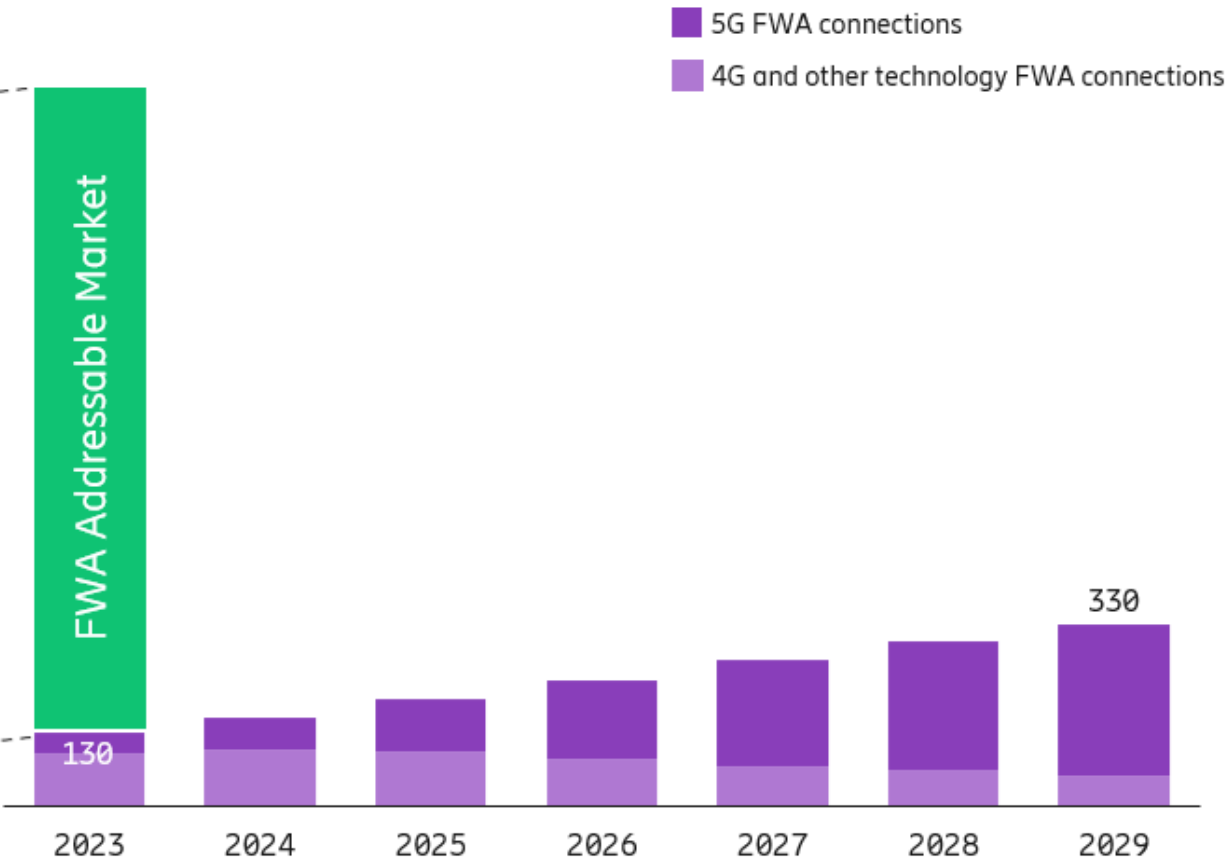
■ 5G FWA connections
■ 4G and other technology FWA connections

FWA Addressable Market

130

330

2023 2024 2025 2026 2027 2028 2029

Source: Strategy Analytics and Ericsson Mobility Report (Nov. 2023)

Cellular IoT connections expected to reach 6 billion in 2029

Cellular IoT connections by segment and technology (billion)

■ Broadband IoT and Critical IoT (4G/5G)   ■ Massive IoT (NB-IoT/Cat-M)
■ Legacy (2G/3G)
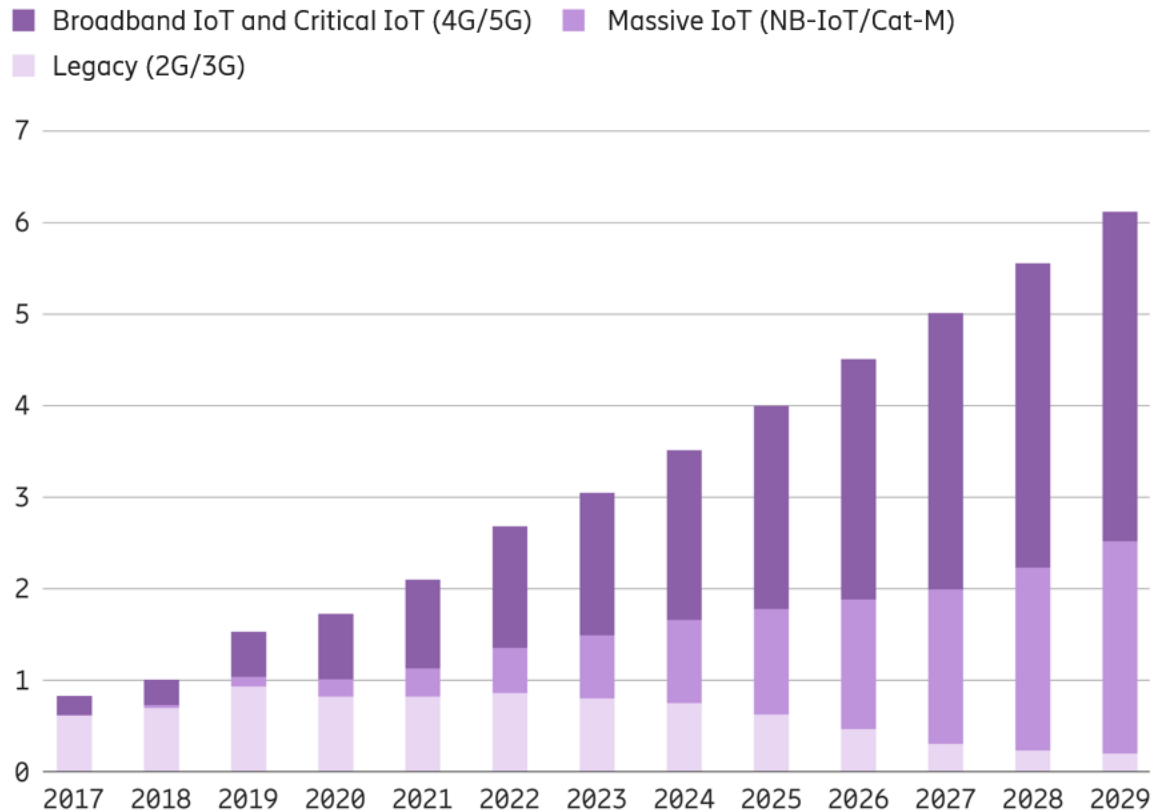
- Cellular IoT reach 3 billion in 2023, North & East Asia is leading region with 2 billion connections at the end of 2023.

- The Massive IoT technologies continue to be rolled out around the world.

  - 128 service providers have deployed or commercially launched NB-IoT networks and 60 have launched Cat-M

- Broadband IoT (4G/5G) reach 1.6 billion connections at the end of 2023.

- Cellular IoT connections will reach 6.1 billion by the end of 2029, 60 percent will be broadband IoT (4G/5G).

- IoT devices connected via 2G and 3G are in slow decline 20% annually up to 2029.

Public announcements about Ericsson RedCap

Ericsson, Verizon, MediaTek complete Redcap 5G sessions.

Ericsson, Vodafone and Qualcomm demonstrate first Reduced Capability data call in Europe

Ericsson, MediaTek showcase RedCap interoperability

Ericsson joined China Mobile's RedCap "1+5+5" Innovation Demonstration City Program to promote the high-quality development of 5G to a new level

Ericsson Qualcomm and Quectel in China Mobile 5G live network

Airtel with Ericsson tests India's first RedCap on its 5G network

Singtel first to trial RedCap in Singapore - Mobile World Live

Optus preps network for 5G wearables in Australia with Ericsson's RedCap

Telstra & Ericsson perform VoNR call with RedCap software in Australia on 5G

Malaysia will be first in Southeast Asia to use Ericsson's 5G RedCap | Free Malaysia Today (FMT)

10

Redcap Press releases during 2023

Support for VoNR and data calls, low and mid band, FDD and TDD, with Qualcomm and Mediatek

Ericsson Industry 4.0 Ecosystem

Ecosystem partners completes the solutions required by the 10 000 000 industry sites

Cellular offerings enables industrial operational efficiency and safety.

The Ericsson marketplace displays partner offerings based on customers needs

Ericsson Device and Application Verification
Testing throughout the ecosystem and value chain

Chipset → Module → End device → Operator
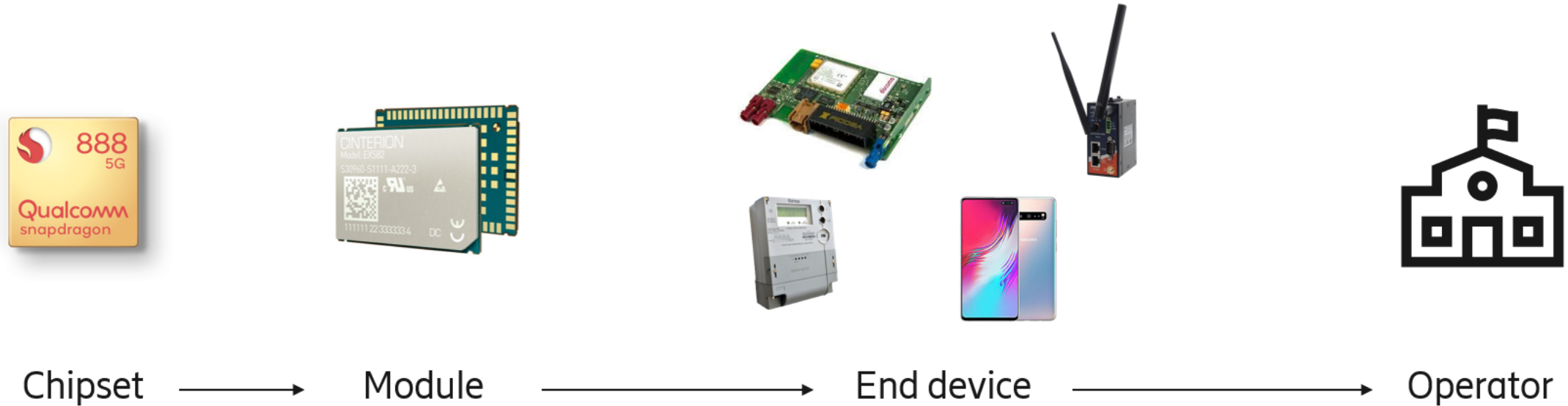
Ericsson, with its partners, invest in interoperability between network and devices from an early stage in the development cycle, on all levels of the architecture and from end to end in the value chain, to secure that standards are implemented correctly, devices are network friendly, and networks are device friendly.

Testing, certification, cybersecurity, and regulatory approvals are carried out at different stages, including custom-made operator approval programs for target markets, devices or use cases.

ERICSSON Connected

ERICSSON Verified
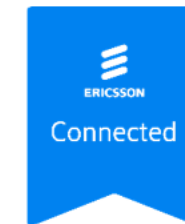
OPERATOR Approved

"Connected" and "Verified" are certification programs run by Ericsson
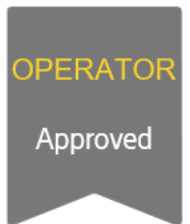
Ericsson can also run operator approval programs

The testing and validation steps of a Cellular device

R&D Development

R&D development of your device together with low-level testing and sub-system verification

Simulator testing

Testing of your device with test instruments and possible Network simulators in order to perform your first level of cellular testing
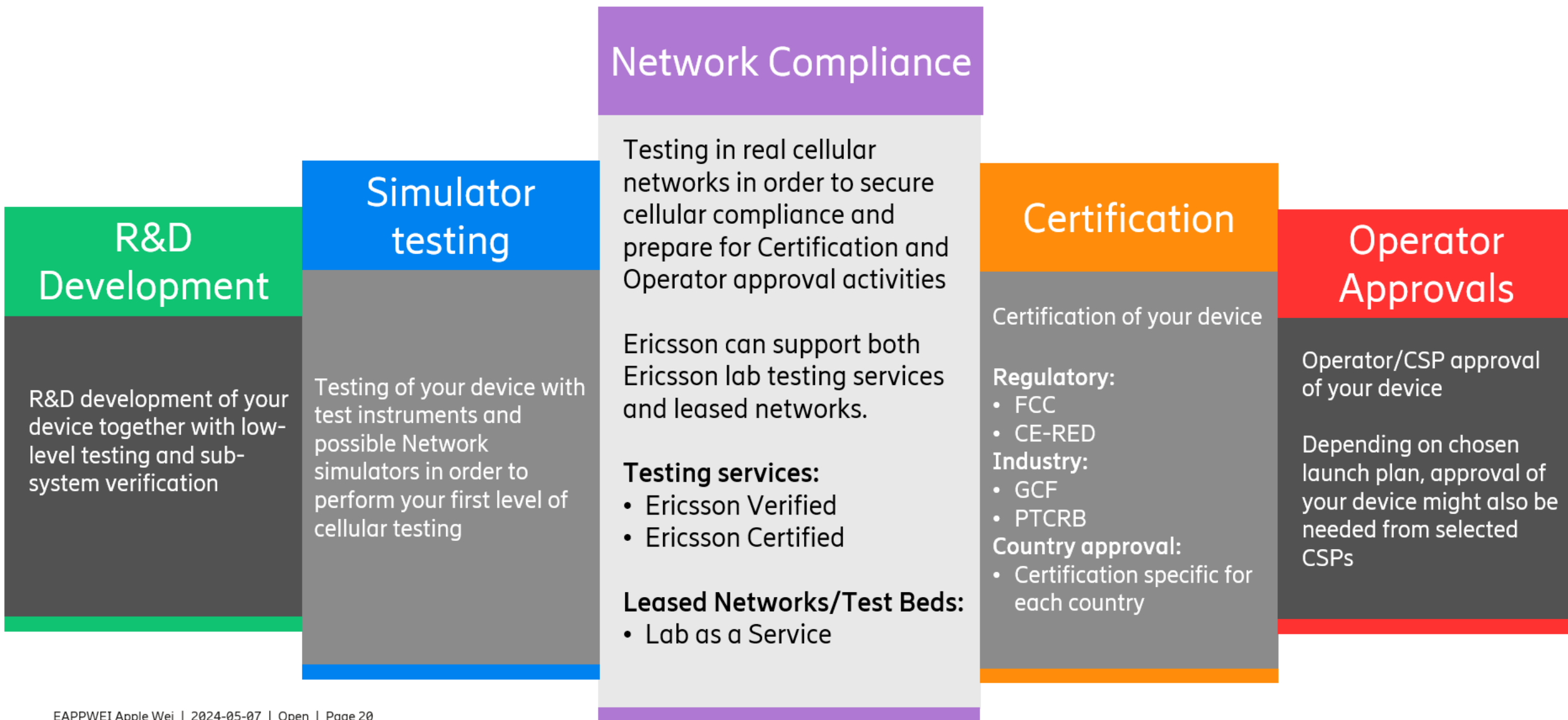
Network Compliance

Testing in real cellular networks in order to secure cellular compliance and prepare for Certification and Operator approval activities

Ericsson can support both Ericsson lab testing services and leased networks.

Testing services:
- Ericsson Verified
- Ericsson Certified

Leased Networks/Test Beds:
- Lab as a Service

Certification

Certification of your device

Regulatory:
- FCC
- CE-RED

Industry:
- GCF
- PTCRB

Country approval:
- Certification specific for each country

Operator Approvals

Operator/CSP approval of your device

Depending on chosen launch plan, approval of your device might also be needed from selected CSPs

Accelerating global market access of devices

Richardson Montreal Düsseldorf Beijing **Taipei**

- ● DNT Global Lab
- ● Lab as a Service
- ● Digital Airspace Coverage maps
- ● Connected Vehicle Testing

Securing best customer experience in new 5G use cases with Ericsson testing services

https://www.ericsson.com/tw

For device verification inquiries, please contact
kenny.a.chen@ericsson.com

Scan to download the presentation